STATUS OF THE CLAIMS:

The following is the status of the claims of the above-captioned application, as amended.

Claim 1. (Previously presented) A method of fluorescence analysis of enzyme granules comprising:

obtaining data on emitted light from a first granular composition comprising a core, a layer of purified enzyme, and a coating agent disposed upon the purified enzyme, wherein the coating agent forms a layer around the granule, the first granular composition having known quality parameters;

illuminating a second granular composition comprising a core, a layer of purified enzyme, and a coating agent disposed upon the purified enzyme, wherein the coating agent forms a layer around the second granule, with light capable of fluorescence excitation of a fluorescent marker comprised in the second granular composition, wherein the layer around the second granule absorbs light from the fluorescent marker;

detecting light emitted from the fluorescent marker;

predicting the amount of fluorescent marker accessible to fluorescence excitation in the second granular composition by comparing the amount of emitted light from the fluorescent marker with the data; and

indicating one or more quality parameters of the second granule to a computing unit or user.

Claim 2. (Previously presented) The method of claim 1, wherein the second granular composition is illuminated with a light source producing ultraviolet light having wavelengths between 10-380 nm.

Claim 3. (Original) The method of claim 2, wherein the ultraviolet light consist of 1-10 discrete monochromatic wavelengths.

Claim 4. (Previously presented) The method of claim 3, wherein the ultraviolet light consist of one discrete monochromatic wavelength.

Claim 5. (Previously presented) The method of claim 1, wherein the detecting of light emitted from the fluorescent marker consists of detecting emitted light of 1-10 discrete monochromatic wavelengths.

Claim 6. (Previously presented) The method of claim 5, wherein the fluorescent marker is peptide, protein, or enzyme and the detecting of light emitted from the fluorescent marker consists of detecting emitted light of one discrete monochromatic wavelength.

Claim 7. (Original) The method of claim 1, wherein the detecting is made with at least one detector capable of converting the emitted light into an electronic signal.

Claim 8. (Original) The method of claim 7, wherein the detecting is made with a CCD or an ICCD camera capable of converting the emitted light into a digital two-dimensional image.

Claim 9. (Original) The method of claim 8, wherein the detecting is made with at least two CCD or ICCD cameras capable of converting the emitted light into a digital two dimensional image.

Claim 10. (Previously presented) The method of claim 1, wherein the step of predicting includes comparing light emitted from the second granular composition to light emitted from the first granular composition with known amounts of fluorescent marker.

Claim 11. (Previously presented) The method of claim 10, wherein the step of predicting is made in real time.

Claim 12. (Previously presented) The method of claim 1, wherein the enzyme comprises bio-catalysts, or therapeutic agents.

Claim 13. (Canceled)

Claim 14. (Previously presented) The method of claim 1, wherein the enzyme is a hydrolase or oxidoreductase.

Claim 15. (Previously presented) The method of claim 1, wherein the first and second granular compositions further comprise auxiliary granulation agents.

Claim 16. (Previously presented) The method of claim 15, wherein the auxiliary granulation agents comprise fiber materials, binders, fillers, liquid agents, enzyme stabilizers, suspension agents, cross linking agents, mediators, solvents, and combinations thereof.

Claim 17. (Previously presented) The method of claim 16, wherein the fluorescent marker is an auxiliary granulation agent and the detecting of light emitted from the fluorescent marker consists of detecting emitted light of one discrete monochromatic wavelength.

Claim 18. (Previously presented) The method of claim 1, wherein the first and second granular compositions comprise an enzyme layer intimately mixed with auxiliary granulation agents.

Claim 19. (Previously presented) The method of claim 1, wherein the purified enzyme layer of the second granular composition is a homogenous substantially continuous layer of purified enzyme disposed upon a core. .

Claim 20. (Previously presented) The method of claim 1, wherein the first and second granular composition have an average size between 20-2000 μm.

Claims 21-27 (Canceled)

Claim 28. (Withdrawn) A granulation or coating apparatus comprising

(a) a granulation or coating device comprising at least one chamber for processing material into granules or coated granules,

(b) an optical arrangement for performing fluorescence analysis comprising a light source for illumination of granules being processed, at least one detector capable of detecting light emitted from the granules being processed, means for projecting illuminating light onto a portion of the granules being processed, means for projecting light emitted from illuminated granules to the detector and at least one filtering device for filtering light.

Claim 29-43 (Canceled)

Claim 44. (Previously presented) A method for determining the quality parameter of an unknown granular composition comprising a purified enzyme, and a coating agent disposed upon the purified enzyme, wherein the coating agent forms a layer around the granule, comprising the steps of:

a) providing a calibration model by illuminating a granular composition comprising a purified enzyme layer, and a coating agent disposed upon the purified enzyme, wherein the coating agent forms a layer around the granule, the granular composition having a known quality parameter with light capable of fluorescence excitation of a fluorescent marker comprised in the granular composition, recording one or more images of the light emitted from the granular composition of a known quality and subjecting recorded images to data processing to form a calibration model;

b) illuminating an unknown granular composition comprising a purified enzyme layer, and a coating agent disposed upon the purified enzyme, wherein the coating agent forms a layer around the granule, with light capable of fluorescence excitation of a fluorescent marker comprised in the granular composition wherein the layer around the granule absorbs light from the fluorescent marker;

c) recording at least one image of the light emitted from the unknown granular composition;

d) comparing at least one recorded or electronic image of the unknown granular composition with the calibration model; and

e) indicating the quality parameter of the unknown granular composition to a computing unit or user.

Claim 45. (Canceled)

Claim 46. (Canceled)

Claim 47. (Previously presented) The method of claim 44, wherein the unknown granular composition comprises a core and a homogenous substantially continuous layer of purified enzyme disposed upon the core.

Claim 48. (Previously presented) The method of claim 1 wherein the step of predicting the amount of fluorescent marker in the second granular composition comprises converting the light emitted from the fluorescent marker into an electronic signal and comparing the electronic signal to the data.

Claim 49. (Previously presented) A method of fluorescence analysis comprising illuminating a granular composition, comprising a purified enzyme and a coating agent disposed upon the purified enzyme, wherein the coating agent forms a layer around the granular composition, with light, wherein the granular composition is capable of fluorescence excitation of a fluorescent marker comprised in the granular composition, and wherein the layer around the granular composition absorbs light from the fluorescent marker; detecting light emitted from the fluorescent marker; predicting the amount of fluorescent marker in the granular composition through the comparison of the amount of emitted light from the granular composition with data on emitted light from a granular composition of known properties; and indicating at least one quality parameter as a result of the fluorescence analysis to a computing unit or user.

Claim 50. (Withdrawn) A process for analyzing a property of a granular composition comprising an enzyme by subjecting the granular composition to fluorescence analysis, comprising the steps of:

a) preparing a granular composition comprising a purified enzyme and optionally auxiliary granulation agents in a granulation apparatus;

b) illuminating the granular composition with light capable of fluorescence excitation of a fluorescent marker comprised in the granular composition;

c) detecting light emitted from the fluorescent marker;

d) predicting the amount of fluorescent marker in the granular composition accessible to fluorescence excitation through the comparison of the amount of emitted light from the granular composition with data on emitted light from a granular composition of known properties; and

e) changing at least one process parameter as a result of the fluorescence analysis.

Claim 51. (Withdrawn) A process for analyzing a property of a granular composition comprising an enzyme by subjecting the granular composition to fluorescence analysis, comprising the steps of:

a) preparing a granular composition with granules comprising a purified enzyme and optionally auxiliary granulation agents in a granulation apparatus;

b) coating the granules of a);

c) illuminating the granules of b) with light capable of fluorescence excitation of a fluorescent marker comprised in the granules;

d) detecting light emitted from the fluorescent marker;

e) predicting the amount of fluorescent marker accessible to fluorescence excitation through the comparison of the amount of emitted light with data on emitted light from a granular composition of known properties; and

f) changing at least one process parameter as a result of the fluorescence analysis.

Claim 52. (Previously presented) The method of claim 1, wherein the layer of the second granular composition is substantially enzyme free.

Claim 53. (Previously presented) The method of claim 1 wherein the layer of purified enzyme of the second granular composition further comprises a filler, or binder.

Claim 54. (Previously presented) A method of fluorescence analysis of enzyme granules comprising:

obtaining data on emitted light from a first granular composition having known quality parameters;

illuminating a second granular composition comprising enzyme disposed within a coating agent layer around the granule, with light capable of fluorescence excitation of a fluorescent marker comprised in the second granular composition, wherein the layer around the granule absorbs light from the fluorescent marker;

detecting light emitted from the fluorescent marker;

predicting the amount of fluorescent marker accessible to fluorescence excitation in the second granular composition by comparing the amount of emitted light from the fluorescent marker with the data; and

indicating a quality parameter of the second granule to a computing unit or user.

Claim 55. (Previously presented) The method of claim 54, wherein the quality parameter is the thickness of the layer of the second granular composition or the biologically active dust in the second granular composition.

Claim 56. (Previously presented) The method of claim 54, wherein the fluorescent marker is peptide, protein, enzyme or auxiliary granulation agent.